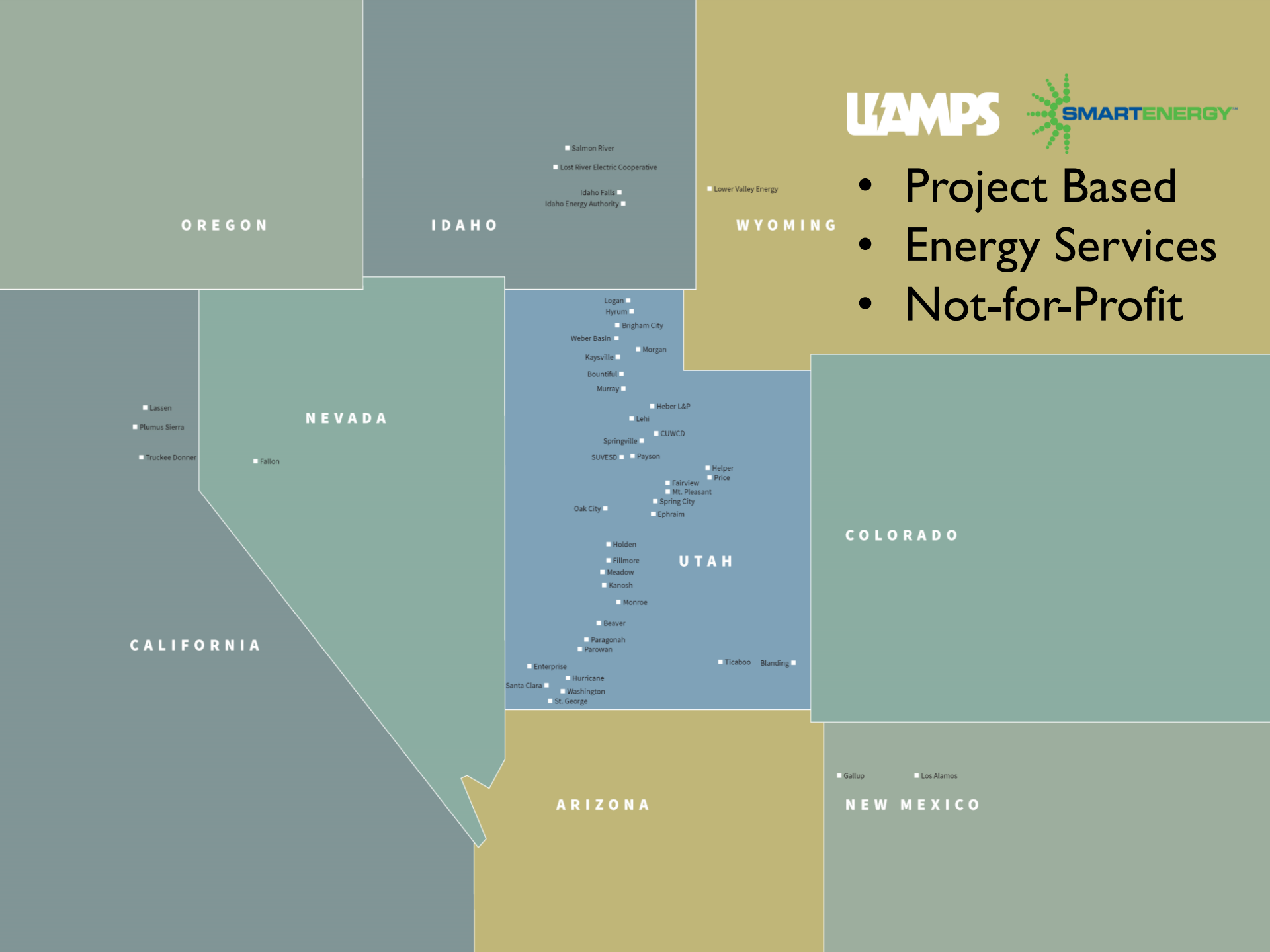
UAMPS
Utah Associated Municipal Power Systems

SMARTENERGY

UTAH STATE LEGISLATURE PUET COMMITTEE

AUGUST 21, 2019


UAMPS
SMARTENERGY
• Project Based
• Energy Services
• Not-for-Profit
OREGON
IDAHO
WYOMING
NEVADA
CALIFORNIA
UTAH
COLORADO
ARIZONA
NEW MEXICO
Salmon River
Lost River Electric Cooperative
Idaho Falls
Idaho Energy Authority
Lower Valley Energy
Logan
Hyrum
Brigham City
Weber Basin
Morgan
Kaysville
Bountiful
Murray
Heber L&P
Lehi
CUWCD
Springville
SUVESD
Payson
Helper
Price
Fairview
Mt. Pleasant
Spring City
Oak City
Ephraim
Holden
Fillmore
Meadow
Kanosh
Monroe
Beaver
Paragonah
Parowan
Enterprise
Hurricane
Santa Clara
Washington
St. George
Ticaboo
Blanding
Lassen
Plumus Sierra
Truckee Donner
Fallon
Gallup
Los Alamos

RESILIENCY

Re · sil · iency:

1. the capacity to recover quickly from difficulties; toughness.
"the often remarkable resilience of so many British institutions"

2. the ability of a substance or object to spring back into shape; elasticity.

RESILIENCY?


People
Training
Infrastructure
Capacity/
Resource mix
IT/
System
Improvement
Planning
Resiliency

PUBLIC POWER RELIABLE PUBLIC POWER PROVIDER

- Public Power created the RP3 program exists to create criteria in four areas:
  - Reliability : Emergency response, cyber and physical security
  - Safety : From management to frontline
  - Workforce Development : Training, expanding perspective
  - System Improvement : Long term planning

RP3 RELIABLE PUBLIC POWER PROVIDER

American Public Power Association

UAMPS RESILIENCY IN FOCUS

UAMPS Resiliency in Focus:

(1) Capacity/Resource mix: Carbon Free Power Project (CFPP) along with resource adequacy

(2) Physical resiliency: UAMPS members in both urban and rural areas are making the investment necessary

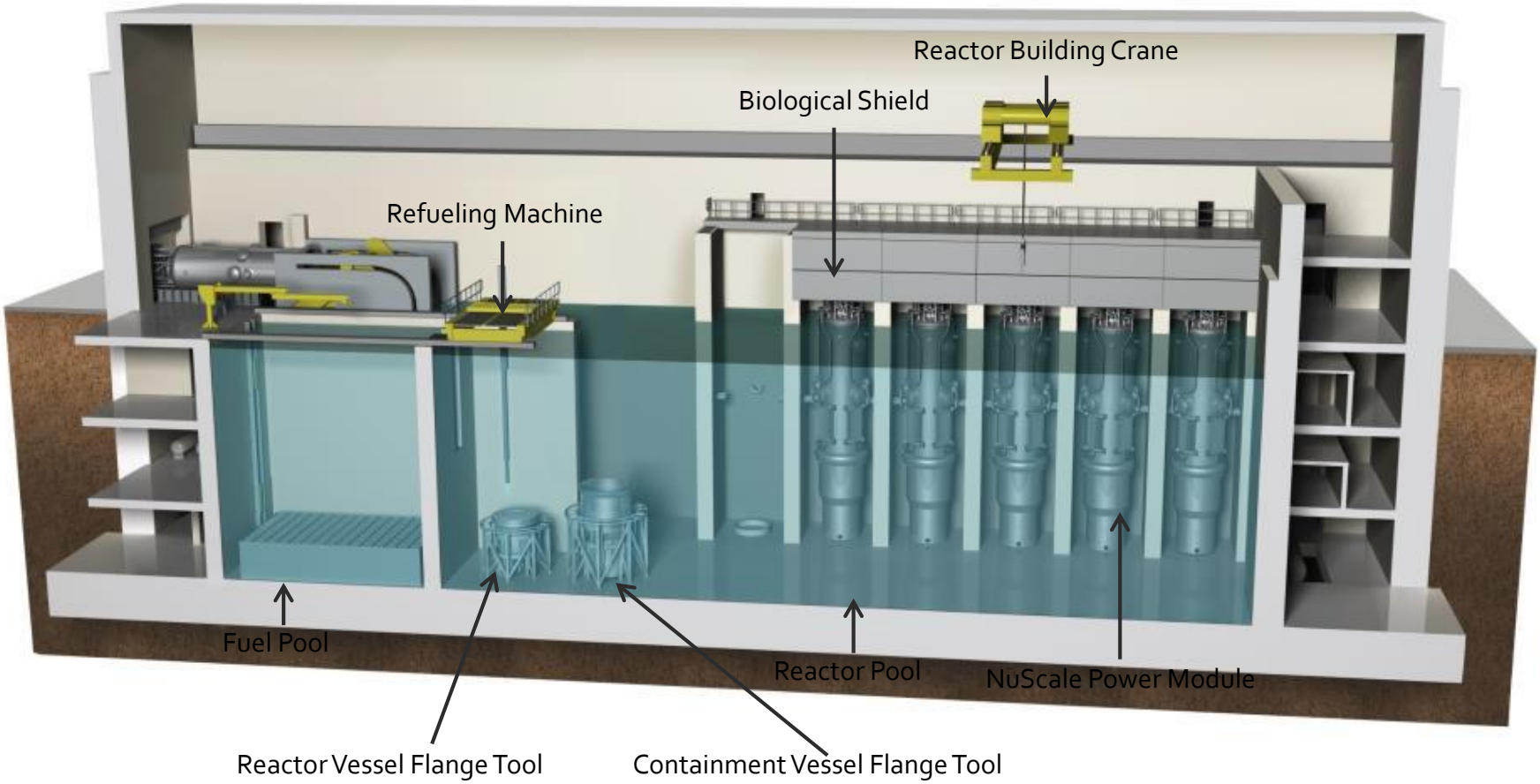
Capacity and Resource Adequacy

RED MESA TAPAHA SOLAR

- Power Purchase Agreement with the Navajo Utility Authority (NTUA)
- 66 MW Solar Photovoltaic facility
- Located on the Navajo Nation in San Juan County, Utah
- Commercial Operation Date in June 2022
- NTUA will use proceeds to support electrification on the Navajo Nation

REACTOR BUILDING CROSS SECTION

Reactor Building houses NuScale Power Modules, Fuel Pool, and Reactor Pool

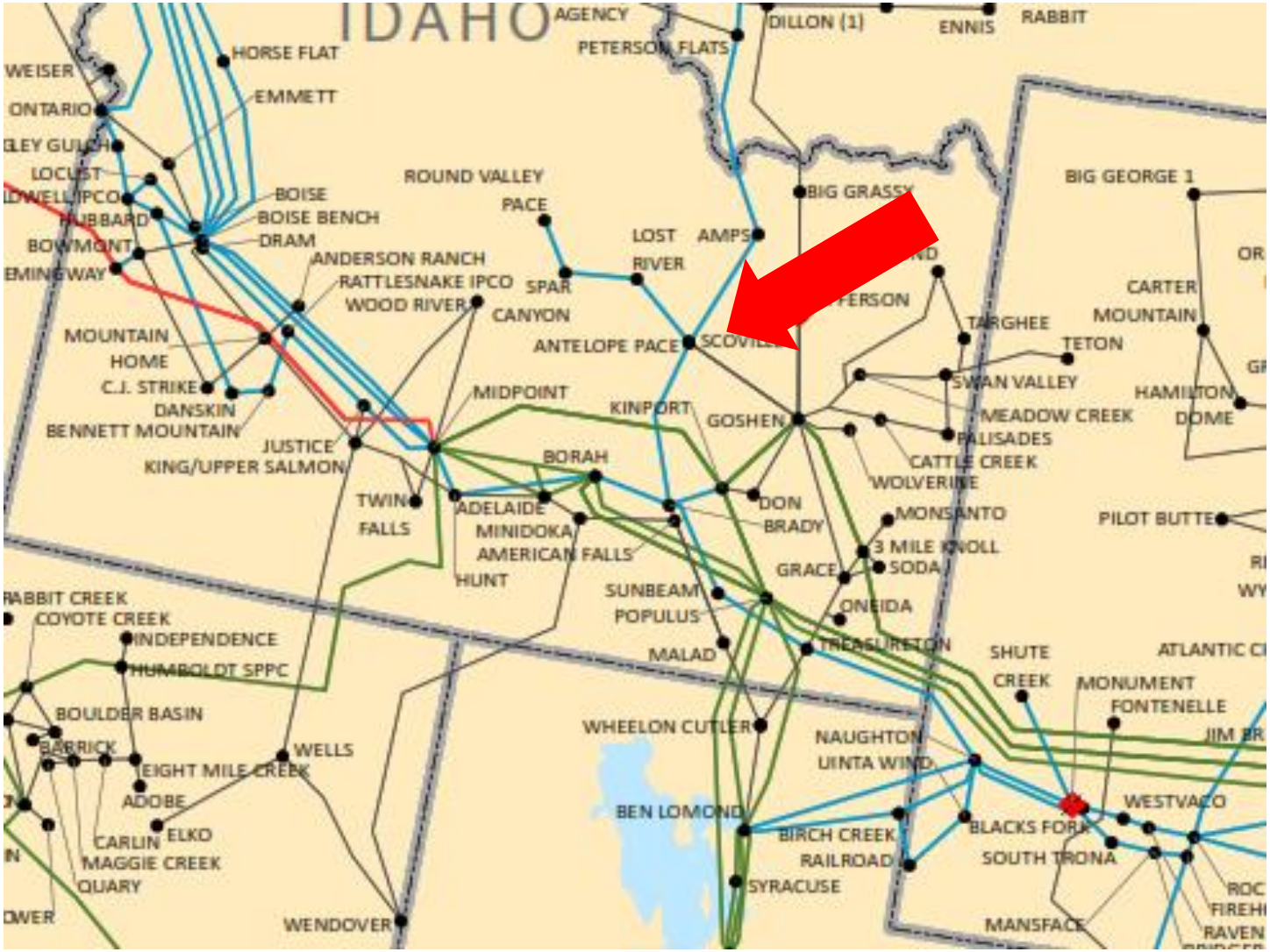


UAMPS SMARTENERGY

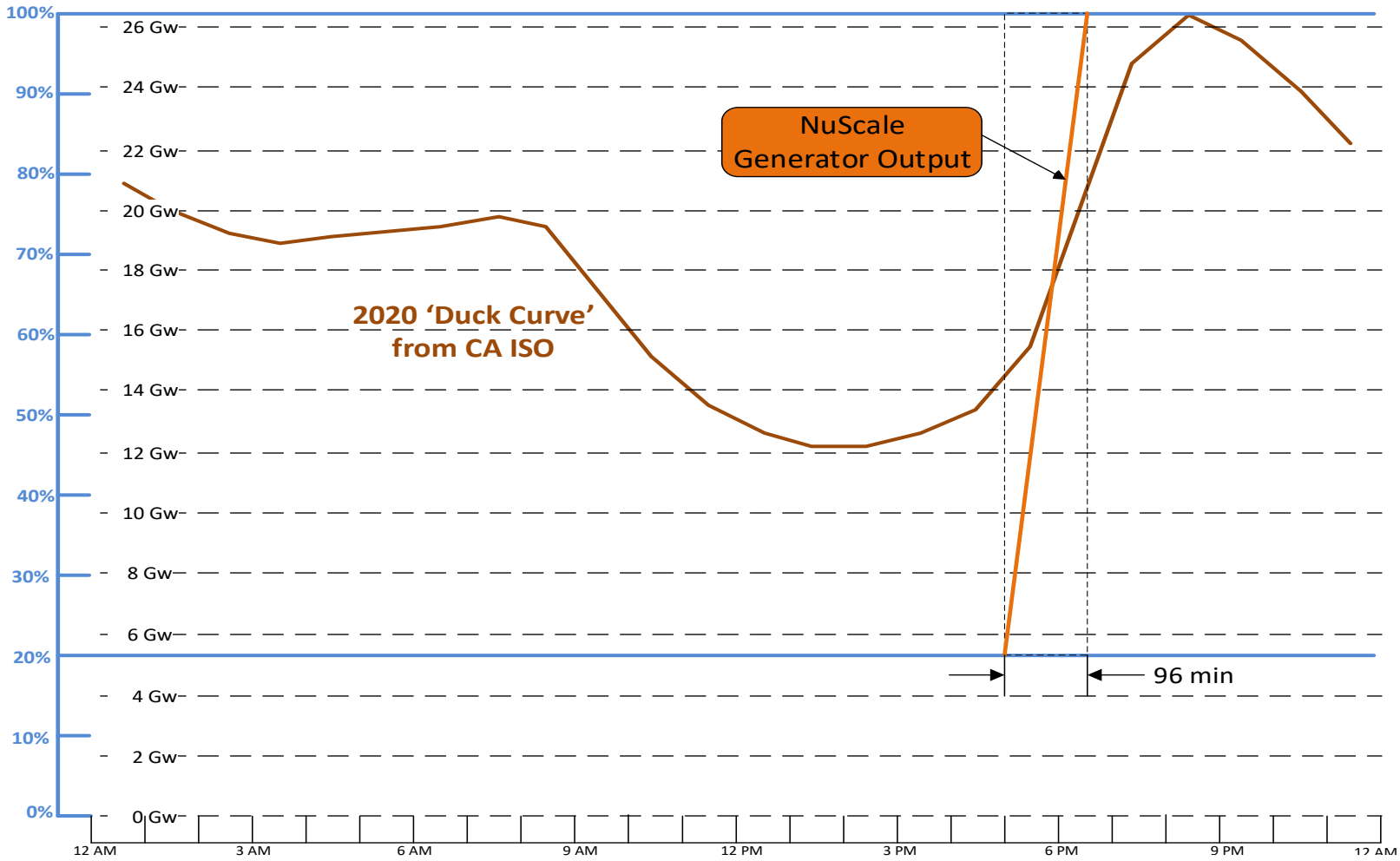
CFPP ATTRIBUTES

- NRC finding that NuScale Plant will not require ***Back-Up Power*** from either on-site sources or grid for safe shut-down
- ***Fast Dispatch*** from 33% to 100% of capacity
- NRC finding that NuScale plant will only be required to have ***Emergency Planning Zone*** to its fence line
- INL/UAMPS looking at SMR ability to keep INL online in emergencies

TRANSMISSION

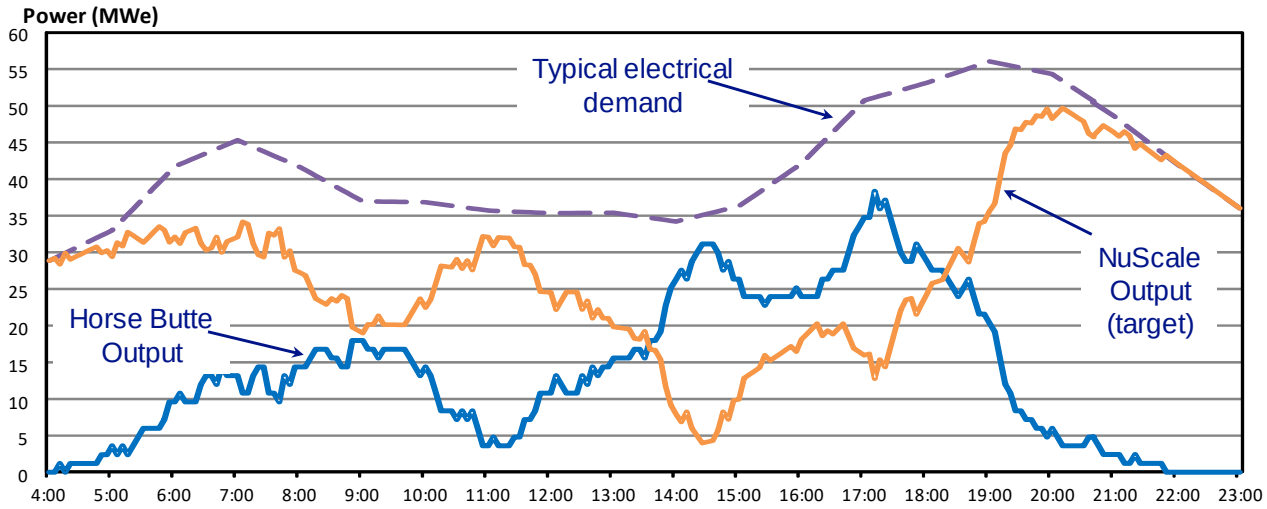


NUSCALE AND THE 2020 CALIFORNIA "DUCK CURVE"



HORSE BUTTE WIND FARM

- Commissioned in 2012
- 32 Vestas V100 turbines
- 1.8 MWe capacity per turbine
- 57.6 MWe total capacity
- 17,600 acres



- Study used Typical Electrical Demand based on 24 hour output (Nov. 11, 2014)
- NuScale design meets or exceeds EPRI Utility Requirements Document (URD), Rev. 13, load following and other ancillary service requirements.

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Physical Resiliency

PHYSICAL RESILIENCY IN RURAL AND URBAN UTAH

Urban UAMPS members:

- Tree management:
  - Urban members invest: Bountiful City approx. $700,000+ and Murray City up to $1M annually (full-time and part-time staff)
  - This translates into higher than industry average reliability and low outage rates both during the summer and winter months

Rural UAMPS members:

- Vegetation management:
  - Spring City has designated vegetation management crews
- Securing infrastructure:
  - Mt. Pleasant upgraded distribution lines to 7200 KV and buried 87% of their lines, installing equipment to enhance insulation.

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